

82
Add the following new claim:

--18. (New) An excavator in which an upper turning body is mounted on a lower traveling body, and an excavation attachment is provided on the upper turning body, comprising an engine as a power source, a generator driven by the engine, and a plurality of electric motors rotated by electric power supplied from the generator, wherein the electric motors as a driving source individually operate the lower traveling body, and the upper turning body and each operating part of the excavation attachment.--

REMARKS

Favorable reconsideration of the present application is respectfully requested.

New Claim 18 has been introduced. Claim 18 is similar to Claim 1 but further recites that the electric motors *individually* operate the lower traveling body, and the upper turning body and each operating part of the excavation attachment. Basis for this can be found in Figure 3.

According to a feature of the invention, an excavator includes a *plurality* of electric motors as a driving source to operate the lower traveling body, the upper turning body and each operating part of an excavation attachment. For example, in the non-limiting embodiment of the figures, the lower traveling body is operated by the motors 6, 7, and the upper turning body is operated by the electric motor 13. This avoids the need for separate power transfer equipment, such as a hydraulic pump and motors, for transferring power from a single motor to the various elements to be actuated.

Claims 1-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over the U.S. patent to Kinugawa et al '811 in view of Ullmann '733, in which Ullmann was cited to teach

an engine in concert with a power generator of an excavator for driving electrical mechanisms. However, this rejection is respectfully traversed.


Kinugawa et al discloses a battery driven hydraulic excavator having a single electric motor 3 powered by a battery 2. The electric motor drives a hydraulic pump 4 which powers various hydraulic motors, including the hydraulic actuator 11a for rotating the upper body, and the hydraulic motor 12b for driving the crawlers 12. However, there is no disclosure in Kinugawa et al for the claimed *plural* electric motors which operate as a driving source for elements including the lower traveling body and the upper turning body, particularly the *plural* electric motors which *individually* operate as a driving source for elements including the lower traveling body and the upper turning body, as is recited in new Claim 18. Moreover, this difference is significant since Kinugawa et al thus requires a heavy hydraulic pump, motors and lines, in addition to a large electric motor, for operating these elements.

Nor would Ullmann '733 provide a teaching for overcoming this shortcoming of Kinugawa et al. As discussed in the previous response, Ullmann only describes the use of the electric motor for the excavation equipment, but there is no description in Ullmann of electric motors for driving either the lower traveling body or the upper turning body (see page 2 of the response filed on January 10, 2002). Thus, whatever teaching Ullmann may have with respect to an engine, it would provide no teaching for modifying Kinugawa et al to have electric motors for driving the lower traveling body and the upper turning body. The claims therefore clearly define over any combination of the cited references.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicits an early Notice of Allowability.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No. 24,618
Robert T. Pous
Attorney of Record
Registration No. 29,099



22850

(703) 413-3000
GJM:RTP/cja

I:\atty\RTP\199202us-am2.wpd

199202US-2X PCT



Marked-Up Copy

Serial No: 09/700,729

Amendment Filed on:

6-11-02

IN THE CLAIMS

--1. (Amended) An excavator in which an upper turning body is mounted on a lower traveling body, and an excavation attachment is provided on the upper turning body, comprising an engine as a power source, a generator driven by the engine, and a plurality of electric motors rotated by electric power supplied from the generator, [characterized in that] wherein the electric motors as a driving source operate the lower traveling body, and the upper turning body and each operating part of the excavation attachment.--

Add the following new claim:

--18. (New)

A large, stylized handwritten signature or set of initials in the bottom right corner of the page.